



## **Priority Setting for Health Research: Toward a management process for low and middle income countries**

### **Country experiences**

- Philippines
- South Africa
- Brazil
- The Netherlands

### **Overview of existing tools and methods**

Collaborative Paper<sup>1</sup>

## COHRED perspectives on priority setting for health research

The Council on Health Research for Development (COHRED) supports countries to optimise their health research potential to improve health and reduce health inequities and to generate economic and social prosperity. COHRED prioritises the poorest countries/regions/populations. It achieves its mission by providing support (*processes, methods, technical information, learning opportunities, advocacy, motivation, seed-funds*) which countries can use to develop their own health research systems and partnerships to pursue high quality research focused on priorities for advancement in health as identified by them.

Research should take place in and help build National Health Research Systems (NHRS). These systems should ensure optimal governance of research, human and financial resource management, and research production and utilisation. Priority setting and developing the capability for priority setting are minimum requirements for a research system to function well.

Since 1993, COHRED has published working papers, studies and a set of criteria to help guide priority

setting at national level, and supported some 25 countries in developing national priority setting processes.

Although many organisations in health research, science and technology and other sectors have developed methods and tools for priority setting in health and for research, scarce information is available on the best *processes* to ensure priority setting for national health research is sustainable, remains up to date, and leads to relevant actions.

The COHRED Priority Setting Initiative works with institutions, development and health research partners to find and share practical solutions to priority setting. This Working Paper is the first step in a 'learning spiral' that engages research managers and institutions to share experiences. From these interactions, a process and approach will be distilled that people, institutions and other development partners can use or adapt to make priority-setting work for their countries.

### Keywords

health research priority setting/priority setting for health research/health research tools and processes for priority setting/health research priority setting Netherlands/health research priority setting Brazil/health research priority setting Philippines/health research priority setting South Africa/health research for development/research for health/COHRED/Council on Health Research for Development

### Acknowledgement

This collaborative paper is jointly authored by Antonia Angulo, Lennart Freij, Sylvia de Haan, Rebecca de los Rios, Abdul Ghaffar, Carel IJsselmuiden, Marijke Janssens, Mohamed Jeenah, Anaf Masood, Gabriela Montorzi, Jaime Montoya. Editorial support, Michael Devlin, COHRED.

The COHRED Working Paper Series publishes authored and collaborative papers. *Authored papers* are attributed to the people leading the analysis, concept development and writing. *Collaborative papers* are the result of interactions between groups of professionals that have been convened by COHRED to improve understanding on a specific area of research for health, where all participants have made an equal contribution.

### COHRED Working Paper Series

COHRED Working Papers capture lessons and synthesize new thinking on improving health research and health research systems in developing countries. The series reflects the work in progress of the COHRED programme with developing country partners and others involved in research for health. Each COHRED Working Paper is externally peer reviewed.

### Learning Spiral

The COHRED Learning Spiral is COHRED's process of dialogue and critical review by groups of health research experts – from South and North – of approaches to how developing countries can improve their health research systems. Specific learning points in the Spiral are opportunities for publications and lessons to emerge from this experience. Working Papers are one point in this ongoing learning process.

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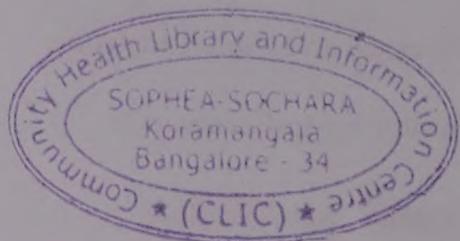
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- 2.1.2** Lomas, J., Fulop, N., Gagnon D., Allen, P., On being a good listener: setting priorities for applied health services research.
- 2.1.3** OECD, Priority Setting: Issues and Recent Trends, in Governance of Public Research, toward better practices.
- 2.1.4** Gibson, J.L., Martin, D.K., Singer, P.A., Setting priorities in health care organizations: criteria, processes, and parameters of success.
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# Priority setting for health research

## Toward a management process for low and middle income countries

### Executive Summary

This Working Paper documents the interactions of a 'think tank' consultation, initiated by COHRED, bringing together health research managers from Brazil, South Africa, The Netherlands, The Philippines, the private sector, the Pan American Health Organization (PAHO), the Global Forum for Health Research and COHRED.

Its purpose was to better understand the issues countries face and their needs in moving priority setting forward as well as seeking advice from professionals on how COHRED can support them in managing a process of setting and measuring progress in health research priorities.

Rather than having priorities 'reviewed' and 'set' through a workshop or national activity that produces a plan reflecting the situation at one point in time, the discussion in this think tank examined what *process* is needed so that national health research priorities are managed in a dynamic way, and are measured, updated and can evolve with the reality of the national, operational and political context.

*The key question, then, is: how to improve the management of a priority setting process to optimally evolve within the reality of a country's research environment?*

This suggests that the process and the focus on management - the staff skills, roles and relationships to be built and managed in a health research system - need to take precedence over the tool and method used. In essence, there is a good chance that if the

research manager can 'get the process right' the rest will fall into place. Tools, then, become an important and useful part of defining what needs to be delivered through the process and management (performance) goals, but these do not necessarily define the quality or the impact of priority setting.

When focusing on the priority setting *process*, it is necessary to approach it as a continuous and cyclical activity that will involve an increasing number of people over time and will build on better and more accurate data as the process continues. The focus should be on action resulting from the defined agenda. It is important to show that setting a health research agenda will lead to action, even though, at the beginning, it may only be possible to implement part of the total agenda. This orientation towards action, and the notion that the process will improve over time, will help to motivate people to remain involved in the agenda setting.

This publication is a step in a learning process where results will be shared and validated with a broader number of countries, in learning interactions throughout the year (*see also: [www.cohred.org/priority\\_setting](http://www.cohred.org/priority_setting)*). It is expected that a number of useful country experiences and guidelines of processes that have worked - or not - will emerge from this learning process over the coming two years.

This think tank did not seek to draw conclusions or to reach consensus. It was an issues identification and problem solving session between practitioners with the aim of outlining some key process areas needed for successful priority setting in health research.

# 1. Key issues on priority setting for health research

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## 1.1 Introduction

### Making health research priority setting work for countries and research managers

A special think tank consultation was held to engage with research managers and practitioners from several developed and developing countries to increase the understanding of the key issues necessary for a successful national priority setting process for health research. The first day of discussions took stock of existing methods and allowed participants to share their experiences. The second day looked at the way forward, specifically addressing three questions: *how to implement a priority setting agenda?; how to monitor and evaluate the priority setting process?; and how to ensure that the process goes beyond the planning phase and remains alive?*

This consultation is the starting point of an ongoing learning process which will engage larger numbers of people and institutions from a wide range of countries. It aims to develop a dynamic approach to priority setting that is continuously adapted as new experiences become available. The approach will guide research managers in the setting and updating their priorities, and support them in using priority setting as a key strategy for strengthening the National Health Research System (NHS).

This working paper presents the country experiences discussed (*section 1.3*) and extracts the main issues that the research managers participating in the consultation consider to be relevant for a successful priority setting process (*section 1.2*). It also identifies activities and roles that COHRED can play in supporting countries in their priority-setting work (*section 1.4*).

## **1.2 The process of priority setting: steps and important issues**

### **1.2.1 Scanning the environment: Where are the main resources for health research?**

Before engaging in a national priority setting process, it is important to consider the environment within which it should take place. Key questions include: who is involved in research for health<sup>2</sup> in the country? How do policy-makers perceive research? What is the capacity available to do, use and fund research?

A scan of the health, research and political environment in the country will guide decisions on whether the time is right to start a priority setting process, or if other parts of the health research system first need to be strengthened.

Changes in a country's political situation can determine the decisions around priority setting. If upcoming elections are likely to change political leadership in the country, the best decision may be to start the priority setting process when the new political leadership is in place. Likewise, changes in administration (i.e. Health Ministry) can influence the timing and frequency of the priority setting cycle.

A situation analysis is a barometer on the level of awareness of the need for research to inform health and health care decisions. If awareness is low, advocacy to build the case for health research generally will be needed to gain commitment for a priority setting process at a later stage.

### **1.2.2 Inclusiveness: Who should be involved?**

Involvement of multiple stakeholders in priority setting is of fundamental importance both for the credibility of the process and to give the best possible chance for implementation of priorities. All direct stakeholders - those who own the problem and those that can provide the solutions - need to actively participate in setting priorities.

The Essential National Health Research principle of involving the community,

scientists and policy makers/administrators in the process of priority setting has been tried in both developing and industrialised countries, to broaden ownership. Bringing together these disparate groups has several challenges. These include: how to involve members of the community - who may not have the 'right' expertise in the eyes of the health research and policy community - in a way that creates a meaningful exchange with research and political players; how to best involve the private sector or donors - and ensure a contribution or realignment of their agendas to national priorities; how to best link the technical and political sides of the debate; how to bring together multiple sectors, such as health, science and technology, agriculture and ensure a holistic approach to health and health research.

Arguably, the most useful perspective to inform a priority setting process is the view of research managers and colleagues who have gone through this experience in other countries. This 'community' can provide rich and practical input to the process in terms of what has worked well or not, or what tools and methods have helped solve particular problems. Today, practical links of this kind are weak among professionals between countries. More systematic efforts are needed to promote the sharing of these experiences.

### **1.2.3 Methods, tools, criteria: How to 'do' priority setting?**

Since the mid-1990s, a number of methods for measuring the magnitude of health problems and their distribution in a country have emerged. In parallel with this, several models for defining research priorities have been suggested and applied.

Common features of most of these tools and methods are estimations of health problems, identification of gaps in the knowledge about ways to eliminate them and of research needed to control them. The focus is on past and current health problems. Common criteria for the choice of priorities include the possibility to address the problem through research, the

<sup>2</sup> The term health research is used here with a broad connotation in mind. Likewise, national health research system priority setting are meant to encompass research for health outside the health sector.

feasibility and cost of the research and the potential outcome, impact and cost-effectiveness of interventions resulting from the research (See Section 2 Methods for Priority Setting and Annotated Bibliography).

An effective priority setting approach should meet the objectives of the health system. It should aim to achieve maximum health benefits to the population it serves within the available budget and respecting specific equity considerations. Criteria for priority setting should respond to the different challenges involved in the process. They should help balance competing pressures faced by a national health research system, such as: basic vs. applied research; public vs. private research; health needs vs. political interests; national vs. international funding; public vs. private funding. These criteria should also respond to health needs reflected at different levels in the country.

Looking at the reality and needs of the world's lowest income countries, the current offering of tools and methods needs to be improved on. These countries require robust and inexpensive tools that can be effective in data poor environments. Situation analyses in these countries may have to rely on information which is relatively simple and affordable to obtain - for example, the use of mortality figures instead of disability adjusted life years (DALYs) in the measurement of health problems.

A common feature of currently employed tools is that they use and build on past and current data on health status and a health situation in a country, rather than looking at future problems for which research is needed. The application of Foresight methodologies will bring a useful new perspective to the more traditional priority setting methods. They promote broader thinking and improve system preparedness - including its human and financial resources - to deal with various future scenarios. This perspective also looks at what needs to be developed now to address these future problems, it allows adjustments to research strategies and policies. It also helps identify the approach that is closest to the reality of that moment.

Because requirements and opportunities for the choice of how to proceed with priority setting are dependent on a country specific situation at a moment in time, it is difficult to make general recommendations on 'which tool is best'. Research managers will benefit from drawing on the experiences of colleagues in other countries to learn what methods and approaches have worked well (or not), the modifications and adjustments made and the results of other practical experiences.

#### **1.2.4 Equity orientation and legitimacy**

A priority setting process should help promote equity in health and development. To be effective, it is important to have agreement on the values and criteria that should influence health research priorities. The process should use fairness and legitimacy as key ethical elements. Legitimacy is achieved by ensuring the participation of the relevant stakeholders in the process. A useful framework for a fair process - *Accountability for Reasonableness* - is outlined by Daniels and Sabin (see annotated bibliography in section 2) and specifies four conditions for a fair process: relevance, publicity, revision and enforcement. Ensuring that the principles of fairness and legitimacy are followed requires capacity building and continuous improvement right through the process.

#### **1.2.5 Communication, dissemination and feedback of information**

An information and feedback strategy should be an integral part of any priority setting process and national research agenda. Continuous dissemination of research results and feedback to key players and beneficiaries of the process is crucial to get and retain the support from partners. Basic principles for effective communication are to use simple messages and understandable language, communicate frequently and include all groups that have been actively involved in defining the agenda. The communication and delivery of messages in 'real time' - as the process progresses - is crucial.

Documenting the progress of the priority setting process helps increasing its transparency and credibility. Yet, this is rarely

done, creating lack of clarity and causing loss of trust.

In communicating the research agenda to community members, special care should be taken to explain how their concerns have been addressed in the national research agenda. In some situations, community priorities only have local relevance and may not appear in a national research agenda. In this case, a specific recommendation can be made to address these priorities at the local level, through local institutions. Documenting these decisions and reporting them back to the community members are key actions to retain their interest and commitment during revisions of the agenda.

Policy makers' primary interest will be to know how the agenda (and the research to be conducted) will positively impact the health of the population and the decision making process.

### **1.2.6 Scale and scope of priority setting activities: Starting small... What can be done now?**

As a component of the national health research system, priority setting needs - ideally - to build on comprehensive nationwide data and analysis. Gathering this depth of information may not be possible in the initial stages. A practical approach of incremental progress - "start small and build from there" - is a good option in many cases. Initial priority setting could focus on a region or a community, or on specific diseases or institutions. These small experiences will produce lessons to help develop a broad national agenda.

For a single institution or research council, setting and implementing priorities is a relatively straightforward task. A 'multiple entry point' approach should also be considered - that looks at priority setting at the disease and institutional levels. A higher level of coordination is needed when several institutions are involved, or when these institutions are of different types - such as public sector, councils, NGO or private sector. Priority setting should be seen as an ongoing, iterative process in which the quality of data that is used to set priorities improves over time, and in which an increasing number of

institutions and partners are involved. The extent to which priority setting covers a broad range of research areas in one or several sectors may vary from country to country. Furthermore, national priority setting must build on inputs and outputs at several levels (district, national and regional levels, institutional levels, etc).

Examples from both the South and the North show that it is possible to link publicly funded applied and basic health research under a jointly organised priority setting and funding body (*see examples from Philippines in section 1.3.1 and the Netherlands in section 1.3.4*). But it is not clear if there are instructive examples on how to include research funded by NGOs, the private sector and external donors into national priority agendas.

### **1.2.7 'Investigator' and 'curiosity-driven' research**

A research agenda should leave space for 'investigator' and 'curiosity-driven' research. This approach suggests several advantages when improving country health research priorities. It facilitates the involvement of the research community in the research agenda setting process. It ensures links between the science and technology (aimed at promoting innovation and discovery) and health sectors (aimed at implementing more cost-effective interventions). It allows the development of research, within the national health research system, in areas that may not be seen as a priority at the moment of priority setting. And it gives access to international scientific developments.

Leaving space for investigator and curiosity-driven research implies that, despite a good priority setting process and the use of good tools, the resulting research agenda will be imperfect. Scientists may identify problems that have not been picked up in the agenda setting process, and are encouraged to pursue their ideas if sufficient space is created for investigator-driven research.

## **1.2.8 Translating priority health issues into priority health research issues**

A priority setting process helps define the health problems of a country. Health interventions in a country should be informed by evidence. Lack of evidence (as is the case in many developing countries) may be resolved through research. This includes developing more cost-effective interventions, identifying reasons for lack of use of the health system, or developing new technologies and innovations. It is important to make the distinction between health priorities and health *research* priorities, and to communicate and discuss the purpose of the priority setting process to all stakeholders involved. This helps avoid frustration in community groups that may not see the health problems they initially defined reflected in the final health research agenda. On the other hand, priority setting of health problems also provides an opportunity to link the debate about health research priorities to more general health and development priorities, thus re-emphasising the link between research, health and development.

## **1.2.9 Resources for health research priorities**

A clear view of the options and approaches for mobilising human, financial and institutional resources is crucial for putting an effective priority setting process into action. Pooling of funds between public funding bodies is one way of enhancing the chances of implementing national priorities (see examples of Philippines in section 1.3.1 and The Netherlands in section 1.3.4).

The possibility of accessing funds from research funding organisations outside the national public sector remains a challenge. World Bank development grants often specify a proportion for research. How can these funds be channelled to health research? How can countries ensure that funds from other external research donors, including private industry, focus on supporting national priorities? How can a constructive dialogue be developed with external research funding organisations to convince them to support national priorities and the development of national health research systems?

National health and research institutions need to develop their professional and technical capacity to set priorities and to engage partners and lead the priority setting process. A country's initial environmental scan should include an assessment of existing human resources. The priority setting process needs to assess whether the organisations' and partners' current skills are adequate to address the issues defined. Gaps in skills and expertise identified by the scan, then, become a priority area to address. The Foresight methodology further supports this by building the assessment of future skills into the national plan, and by specifying a training plan.

## **1.2.10 Implementation, monitoring and evaluation**

Monitoring and evaluation are vital elements in priority setting, and should become standard practice, just as it is standard practice in health programs. This implies that budget allocation is needed to ensure monitoring, evaluation and follow-up of the research agenda. This is the basis for building a continuous and iterative research priority setting process. It should actively engage an increasing number of players to help improve management of the process over time. This cyclical approach ensures that the process is kept alive and up-to-date. Furthermore, there is a need for the systematic sharing of lessons learned in the monitoring and evaluation processes, including the development of both process and outcome indicators.

## **1.2.11 Sustaining priority setting as a function of the national health research system**

In planning a priority setting process, research managers need to assess what is needed to make it work in a practical way. The grand vision and big picture of what the process should achieve in terms of health and equity for the country is necessary. But perhaps most important in the beginning are small practical steps that can show progress.

Priority setting should be flexible, mapped out over the short, medium and long term, and subjected to regular review and reflection. When putting priority setting into action, a practical and realistic approach is needed. The

overall view needs to be long term. But there will also have to be 'quick wins' – shorter practical steps along the way – to sustain motivation among participants. Addressing crises and political imperatives will require specific short-term objectives. Medium and longer term goals and useful milestones should be defined as a part of the plan.

Taking a process perspective puts the emphasis on delivering a plan for implementation, with financial and human resources mapped out (or gaps identified) and including components for performance evaluation, capacity building and quality improvement.

Special attention should be given to changes in government and administration to ensure that the set priorities are respected. Other elements on the time axis such as monitoring and evaluation and dissemination of information to key stakeholders, are activities that will keep the priority setting process alive.

### **1.2.12 Mechanism for appeal**

Even with optimal preparation, use of suitable tools, and involvement of multiple

stakeholders, it is likely that i) some partners are not in agreement, or ii) that priorities change over time, sometimes at relatively short notice – for example to address new infectious diseases or newly defined health problems. Experience shows that if the priority-setting process has a space for negotiation and 'appeal', it is much more likely to become a truly national agenda, one in which a much larger proportion of stakeholders can find themselves. An independent committee may be convened especially for this purpose.

### **1.2.13 Advocacy**

Advocacy is important at both national and international levels - both in countries venturing into priority setting activities and in countries where priority setting structures and processes have been initiated. The rationale and purpose of priority setting has to be communicated and accepted by health research stakeholders at all levels to sustain priority setting as a function of the national health research system. Advocacy should extend beyond the health sector and also be directed to proponents of other sectors, which harbour important health determinants (e.g. water, sanitation, agriculture).

## 1.3. Country experiences

### 1.3.1 Philippines<sup>1</sup>

#### Environment

In the early 1990s the Department of Health (DoH) in the Philippines took the lead in setting health research priorities. The Ministry of Science and Technology (S&T) – under which the Philippine Council for Health Research and Development (PCHRD) functions – set its own agenda. The financial contribution to health research from the S&T sector is larger than the contributions provided to health research from the DoH. This created a situation where priorities were only able to influence part of the health research carried out.

To remedy this imbalance, the primary health research stakeholders in the Philippines – the DoH and the PCHRD – decided to take a more comprehensive systems approach, by bringing together the agendas and funding streams of the DoH and the PCHRD. This agreement was formalised in a memorandum of agreement signed between the main actors. It specifies the creation of a general fund for health research, and appoints PCHRD as the lead agent for the priority setting process. A law has been drafted (but has yet to be passed by Parliament) to formalise this agreement. While the new partners were willing to pool funds, the priority setting process had to be clear, and both sectors needed to be involved.

#### Priority setting process

The priority setting process applied a bottom-up approach, with five key steps:

1. Division of the country into six zones with the National Capital Region as one zone. This was done to avoid dominance of the participants from the National Capital Region over participants from other regions.

2. Designation of convenors by zone tasked to oversee the priority setting process at regional and zone levels.
3. Designation of region-based experts responsible for facilitating the writing of a situation analysis and conducting the region consultations to identify regional priorities. The situation analysis served as the benchmark and common set of criteria for workshop consultations to identify health and related problems from which research topics were identified and prioritised.
4. Convening a zone assembly to bring together participants from the different regions of each zone to validate the consolidated zone report (prepared by the zone convenor) and arrive at a consensus and ranking of priorities.
5. Convening a task force to formulate a set of national priorities based on the results of the regional and zone-level consultations.

The DoH and the PCHRD, with all key stakeholders, are represented and involved in the various steps of the process.

This bottom-up process was started in 1999. Revisions to the agenda are made yearly. There is as yet no system in place to monitor the implementation and impact of the agenda. In addition, the feedback to and from all participants in the process needs to be strengthened.

#### Lessons learned

- **Continuous communication and feedback.** The priority setting process started at the regional level and ended with synthesising a list of priorities for the national level.

Team members highlighted the importance of providing feedback at zonal and regional levels, and communicating how and why certain priorities have been

<sup>1</sup> Contribution by Jaime Montoya

included in or excluded from the national agenda.

- **Decentralised structure of the health system.** The Philippines has a decentralised health and health care system, where local governments take budgetary decisions. This bottom-up experience made people feel empowered and involved in the decision making process. Some argued that the bottom-up approach could be best complemented with top down initiatives so that both approaches would capture what the top wants and what the bottom needs (Note: 70% of funding for health research comes from central government).

Using a bottom-up approach, and engaging local stakeholders in the process, helps advocate and raise awareness of the need for health research and can influence the budget that is made available to health research, also creating conditions for community to influence decisions at local level.

- **Timing and frequency of the consultation process:** This experience showed that research agenda setting is best done after the administration has set its plans and programmes and new initiatives have been identified. Reviews conducted to date have allowed the integration of new priorities (such as disaster management in response to natural disasters taking place), and the consideration of global developments and their relevance to the national health research situation. However, in general, the reviews do not show major changes in the priority issues on the agenda.

In the Philippines, ministries need to redefine their priorities when a new president takes up office (every 6 years). Optimal timing is to set priorities at the start, and review these at mid-term and end-term.

- **Expertise and commitment of stakeholders.** It was a major challenge to find regional experts who were able to deliver the needed information in time. The quality of participation of stakeholders was also an issue, as not all participants

considered the process relevant. In addition, the private sector was not represented in the process and there is no mechanism in place to facilitate links between the public and private sectors.

- **Advocacy and independent advice.** The involvement of independent regional or international actors helps support local stakeholders in increasing the political commitment for health research. COHRED was involved in this process in the Philippines.

#### Further reading:

- Alan B Feranil (2004) *The Bottom Up Approach in Research Agenda Setting: Lessons from the Philippine Experience*. Philippine Council on Health Research for Development. Paper presented at Forum 8, Global Forum for Health Research, Mexico 2004; downloaded on April 10, 2006 from <http://www.globalforumhealth.org/Forum8/Forum8-CDROM/Presenters.html>
- Department of Health in collaboration with Department of Science and Technology (2004). *Proceedings of the 1st Philippine National Health Research Assembly, 2 June 2004, Philippines*.

### 1.3.2 South Africa<sup>2</sup>

#### Environment

South Africa used the Essential National Health Research (ENHR) approach to set priorities in 1997. The present governing political party had adopted the ENHR strategy already during the period of exile. The 1996 process came at a time when South Africa was going through major political developments and was ready for a change and for a focus on equity.

The process followed the five-step approach recommended by the Ad Hoc Committee on Health Research Relating to Future Intervention Options. It called for information on the burden of disease, determining the lack

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<sup>2</sup> Contribution by Mohamed Jeenah

of success to reduce the burden, trying to understand the contribution research can make in reducing the burden, and the development of 'platforms' to address the major issues – calling for a system approach that looks beyond disease. The agenda set in 1996 has been adopted by the government and accepted by the Department of Health (DoH) and by the Department of Science and Technology (DoS&T). This agenda is used by the Medical Research Council and by researchers in their grant applications. Implementation of the agenda was largely done by those involved in the priority setting process and committed to taking it forward.

### Priority setting process

Following the ENHR priority setting process, the DoS&T<sup>3</sup> decided to do a Foresight exercise, looking at 12 sectors including health. The Foresight process used the ENHR priorities set in 1996, and added the concept of 'multiple futures'. Where the ENHR process assumed one single future, the Foresight process assessed macro scenarios presenting multiple futures and the response of the S&T sector. The Foresight process identified critical questions and used the Delphi method to involve a broad group of people in the processes.

Critical questions included the prioritisation of certain problems over others; the assessment of the need to create partnerships (international, private, etc.) to address each problem vs. the capacity of national players. Various implementation strategies were presented. The prioritisation of responses to questions was done using a common set of criteria at all levels of the consultation.

The outcome of this process led to the development of several 'roadmaps'. For example the discussion on HIV/AIDS vaccines moved beyond vaccine development to needs regarding national capacity to deal with the epidemic, public-private-partnerships, developments in other parts of the world and strategies to be developed if no vaccine would become available in the future. The Foresight process thus catalysed the development of strategies around biotechnology, drug development, health innovation and cost effectiveness of the health system. Most of the Foresight strategies developed have been

implemented, but no formal monitoring or evaluation has been done.

### Lesson learned

The burden of disease approach is a useful starting point for priority setting on current issues. The Foresight approach identifies future issues or problems at an early stage and helps develop strategies to address them. These approaches provide complementary information and input to the priority setting process.

### Further reading

Department of Health, Directorate Research Coordination and Management (1996). Proceedings of the First ENHR Congress on Priority Setting, November 14-15, South Africa

- Department of Health (2001). Health Research Policy in South Africa.
- Foresight method (See section 2.2).
- Delphi method (See section 2.2).
- <http://www.dst.gov.za/>

### 1.3.3 Brazil<sup>3</sup>

#### Environment

The new Brazilian government, which started in January 2003, emphasised the central role of the national health authority in structuring national efforts in health research. It created the opportunity to outline a *National Policy for Science, Technology and Innovation in Health*. The policy is built on two main principles: to increase equity in the health system and to increase equity in health outcomes between groups.

#### Priority setting process

Directly linked to the science policy development, the Ministry of Health (MoH) initiated the priority setting process in 2003.

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<sup>3</sup> Contribution by Antonia Angulo

A group appointed by the National Health Council proposed 20 sub-agendas for health research. As a second step, research priorities for each sub-agenda were identified during national seminars, involving over 500 researchers and policy makers, during the 2<sup>nd</sup> National Conference on Science, Technology and Innovation in Health held in 2004.

During the preparatory phase, 307 cities and 24 states organised local conferences, involving some 15,000 people in total. Some 360 delegates from the health sector were appointed at local conferences, to attend the National Conference. Representatives from the education and science and technology sectors participated. The national policy was approved during the National Conference, together with three sub-agendas. Currently the national policy and priority agendas guide investments from the MoH for research and development, and partly from the Ministry of Science and Technology. From 2003 to 2005, 24 calls for proposals were launched. As a result, 3,962 research projects were submitted and 1,300 financed.

#### Lessons learned

- The focus of the priority setting process in Brazil has, from the beginning, been on implementation, i.e. through the calls for proposals. However, the Ministry of Health funds only a small part of the health research conducted in Brazil. One way of influencing other streams of resources is the organisation of calls for proposals jointly with the Ministry of S&T.
- The Ministry of Health currently distributes small amounts of funds to a large number of projects. But, maybe it is better to have few priorities and large programmes addressing these? Information is needed on the impact of the small grants on addressing the research priorities. Such information will assist in making funding decisions in future.
- Another outstanding challenge is the linkage and response of large research institutions in Brazil to the national agenda. Some of these institutions have not yet defined their agendas, or have set their research agendas out of the context of the national agenda. Involvement and

commitment of these institutions towards the national agenda is needed.

#### Further reading:

- Reinaldo Guimarães, Leonor Maria Pacheco Santos, Antonia Angulo-Tuesta, Suzanne Jacob Serruya. Setting and implementing a National Policy for Science, Technology and Innovation in Health: lessons from the Brazilian experience. To be published in Cuadernos de Saúde Pública.
- Ministry of Health (2005). Agenda Nacional de Prioridades de Pesquisa em Saúde. Brasil. ISBN 85-334-0827-3
- Ministry of Health (2005). Política Nacional de Ciência, Tecnologia e Inovação em Saúde. Brasil. ISBN 85-334-0933-8
- <http://www.saude.gov.br/sctie/decit>

### 1.3.4 The Netherlands<sup>4</sup>

#### Environment

The Netherlands Organisation for Health Research and Development (ZonMW) is a national organisation that promotes quality and innovation in the field of health research and health care. ZonMW actively promotes knowledge transfer and implementation, ensuring that knowledge is exchanged between all relevant stakeholders. The majority of ZonMW's requests for programmes come from the Ministry of Health, Welfare and Sport (VWS) and the Netherlands Organisation for Scientific Research (NWO). The Ministry's main concern is to contribute to public health, including prevention and health care services. NWO is a non-governmental organisation concerned with fundamental and strategic research. Priority setting for the funding received through NWO (30% of ZonMW's budget) is mainly based on criteria of quality and scientific relevance. Priority setting for the funding from the Ministry (70% of ZonMW's budget) is mainly guided by the relevance for public health and health care and the

<sup>4</sup> Contribution by Marijke Janssens

likelihood of implementation of research results.

### Priority setting process

The priority setting process related to ministerial funding starts with a request from the Ministry to set a research programme to address a specific health problem. In response to this request, ZonMW establishes a Programme Committee. The Committee is independent, represents a wide range of expertise, includes patient organisations and user groups, and is usually chaired by a retired professional (to ensure maximum independence).

The Programme Committee assesses whether the question raised by the Ministry is an urgent health priority, if research can contribute to addressing the problem, and if the national research system has the capacity to tackle the problem. The Committee may also use Foresight studies to assess the need for research on the health issue in the future. The Committee examines one health issue at the time and does not set priorities for the whole health system.

If the Committee decides that a problem is relevant and can be addressed through research, it presents a programme proposal to the Ministry. Once approved by the Ministry, ZonMW issues a call for proposals. The proposals are assessed primarily on their relevance to the programme objectives, and on the likelihood of implementation of the results. Proposals must include a dissemination strategy and budget. ZonMW ensures follow up and monitoring of the implementation of results.

The total cycle from the identification of a question by the Ministry, to the completion of research that addresses the question, can take 8 - 10 years. To maintain a continual cycle of priority identification, ZonMW maintains contact with a large group of stakeholders in the country.

ZonMW has funds available to address issues that surface between the cycles of the larger programmes. User groups and patient groups are consulted as a part of this process and included in Programme Committees. In some situations, an advisory council that has done a priority setting exercise formulates a question through the Ministry. In this situation, ZonMW does not repeat the priority setting exercise.

### Lessons learned:

- The link between implementation-oriented research (funded through the Ministry) and basic research (funded through NWO) is not continuous. Programs that fund both areas are not yet developed. Questions come from the Ministry or from NWO. There is a need to better link the health and S&T sectors.
- ZonMW's activities cover a vast amount of public funding for health research in the Netherlands. But they do not provide agenda setting for ongoing research in universities, nor do they work with the private sector. A challenge for the Netherlands remains to develop a national agenda that all stakeholders buy into.

### Further reading:

- <http://www.zonmw.nl>

## **1.4 Making priority setting work for health research: roles for COHRED**

The priority setting consultation discussed the following areas in which COHRED can play a key role:

### **1.4.1 Advocacy and Communication**

COHRED has an important and essential role in advocating for priority setting for health research, in making the case for priority setting. The argumentation and evidence that priority setting can work to make research more responsive to health needs are essential to motivate all stakeholders in a country to engage actively in the process. Sharing of experiences between countries and showing that priority setting is possible (also in resource poor settings) is needed. This international perspective will help increase local acceptance, and support research managers who are leading priority setting processes in their country.

### **1.4.2 Monitoring and evaluation**

COHRED can play a role in the monitoring and evaluation (M&E) of national priority setting processes. As a technical partner it can support the development and integration of appropriate M&E components in the implementation of national priority research agendas (without engaging itself in the administration of these activities). This technical and independent expertise is useful in a sometimes politically sensitive process of priority setting. COHRED can play an advisory role throughout the process, and an advocacy role in ensuring that M&E is standard practice in any priority setting process. It can also help ensure that resources are allocated for this purpose.

### **1.4.3 Process and Methods**

It is crucial to ensure that the process followed for setting the health research priorities is right. It should be continuous and focus on action to implement the defined agenda. COHRED has a role in guiding the development of inclusive national priority setting processes that are action oriented, cyclical, and build on large stakeholder involvement.

In addition, COHRED can make various methods, tools and approaches accessible, and be instrumental in the sharing of experiences applicable to various contexts. Information on 'what works where and when' is useful for countries starting a priority setting process, or for countries revisiting their process and agenda.

### **1.4.4 Knowledge Sharing: Facilitate further learning around priority setting**

This consultation was a first step in a continuous learning process around priority setting for national health research. COHRED and partners will use web-based interactions and face-to-face meetings to engage many more research managers and development partners to build on new experiences and recommendations from countries to improve priority setting. People and organisations interested in priority setting for research will be encouraged to contribute to this 'learning spiral' and to share their expertise. COHRED's role as a facilitator of this learning process reinforces its advocacy and advisory roles.

## 2. Overview of priority setting approaches and methods

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### 2.1 Annotated bibliography

**2.1.1 Rudan, I., El Arifeen, S., Black, R.E., New methodology for systematic priority setting in global child health research. In Forum 9: Global Forum for Health Research. 2005. Mumbai.**

*The objective of this paper is to review existing literature on priority setting, assess the strengths and weaknesses of suggested approaches and propose a systematic methodology to identify research priorities in global health and nutrition.*

The proposed priority-setting methodology is designed to have several levels of activities, systematically addressing all principles upon which it is based.

- Basic Principles in priority setting:
  - Legitimacy and fairness
  - Trans-disciplinary approach
  - Involving the stakeholders in the process
  - Promoting health and development on the basis of equity and health maximisation for the greatest number of people with fixed level of investment
  - Realistic assessment of affordability, deliverability and sustainability of the proposed research
  - Realistic assessment of likelihood of research success in terms of both reaching the endpoint, and the endpoint being effective in reducing disease burden
  - Respecting the principles of economy in terms of cost of research and cost-effectiveness of intervention delivery

- Simplicity, comprehensiveness and applicability of the methodology to a variety of priority setting issues in developing country setting at all population levels (local, national, regional or global) and for one or several diseases risk factors
- Constitution of two groups, a multidisciplinary technical working group and wider reference group. The technical working group's tasks would be to: 1) drive, oversee and coordinate process, 2) gather and organise the evidence for reference group, 3) convene reference group for priority setting exercise, 4) calculate scores and weights, 5) polish the outcomes of several deliberations. The reference group would: 1) advise the technical group, 2) agree and/or modify the criteria tentatively proposed by the technical group, 3) do the actual priority setting based on the evidence and information provided by the technical group.
- Definition of broad dimensions to prioritise competing research options. This step requires the analysis of research options in relation to criteria such as their potential for disease burden reduction, their impact on equity, their likelihood of success in reaching the endpoint, their likelihood of being effective in disease burden reduction, their affordability, deliverability and sustainability in the population of interest.
- Listing of all the competing research options by the type of disease burden they would impact to inform the priority issues ranking process. The approach is based on a 3 steps process: 1) review of literature and subsequent brainstorming sessions with the reference group; 2) categorisation of competing options according to the type of disease burden that they affect; 3)

assessment of prevalence of risk exposure in a population of interest. Risk assessment takes into consideration the estimation of relative risks, the burden of disease of interest, the cost of research and delivery per unit of population and the level of existing funding that is already invested in each research avenue.

- Evaluation and improvement of process through feedback: 1) compare observed outcome to that expected (deliverability, achieved reduction in burden of disease, improvement in equity, likelihood of success, observed cost-effectiveness); 2) integrate all observed indicators into a methodology as empirical obtained values; 3) monitor, evaluate and improve the process from a fairness point of view (to what extent is the process actually consistent with the five conditions of accountability for reasonableness?).
- Implementing recommended priorities requires establishing good links between the priority-setting working group, international and national donors and national policymakers.

### **2.1.2 Lomas, J., Fulop, N., Gagnon D., Allen, P., On being a good listener: setting priorities for applied health services research. Milbank Q. 2003. 81(3): p. 363-88.**

This paper describes how the lessons learned from and the approaches to setting priorities for funding health services are translated into setting priorities for funding health services research. Two case studies (England and Canada) are used to describe a 'listening model' for setting user-driven health services research priorities.

The proposed 'listening model' for priority setting is a stepwise approach, based on the principle of linkage and exchange between research funders and researchers on the one hand and the research's potential users on the other

- Stakeholders should represent potential users of research. The mix of stakeholders will depend on the particular function of the

research priority. The role of stakeholders should be determined in relation to the health system for which priorities are being set (type of research, political and organizational context). Involving system managers and policymakers allows linkage and exchange between researchers and decision makers throughout the research process and increases their sense of ownership. System managers and policymakers do have specific knowledge of the issues in the system and are the ones who will ultimately choose to apply or ignore the results from health services research.

- Two approaches can be used for identifying and assembling any data needed for consultation. The 'environmental scan' approach allows validation of issues identified by stakeholders, as well as identification of health service priorities of other research funding agencies. The 'consultation' approach generates ownership in the stakeholder priorities and offers the doers and users of research an opportunity for linkage and exchange to better understand each other's constraints and practices. The consultation with stakeholders should lead to identification of issues likely to be a priority over the next 3 to 5 years. This longer period allows insulation from immediate political controversy as well as coordination of the timelines of the stakeholders' community with the structure of the research process.

- Criteria that can be used to translate priority issues into priority research themes: 1) the issue is likely to be a high priority for at least 3-5 years; 2) there is not large stock of existing relevant research in the area; 3) the issue is amendable to a significant number of feasible and generalisable research questions; 4) the research capacity exists to respond with high-quality research on this issue; 5) decision makers are receptive to research on this issue; 6) decision makers would be able to use research results on this issue; 7) the research would have potentially high impact relative to its cost.
- Priority ranking is affected by stakeholders' view of the world. Managers consider priorities in terms of issues, policy-makers in

term of interest groups, public in terms of problems, researchers in terms of disciplines or methodologies and clinicians in terms of diseases. Two approaches are suggested for ranking priority issues. 1) The "technical assessment approach" allows ranking of priority issues across potential clinical trial investments. This approach tends to hide under a series of assumptions many value judgments that may reflect those of the broader population of users and payers. On the other hand it requires the adoption of single clear objective to guide the exercise. 2) The "interpretive assessment approach" is best applied in agency wide assessments. It relies on the subjective judgments of participants expressed through structured exercises. This approach offers the possibility of dealing with multiple assumptions and objectives at the same time.

### **2.1.3 OECD, Priority setting: Issues and recent trends (chapter 3), in Governance of public research, toward better practices. 2003, Organization for Economic Co-operation and Development. p. 61-75.**

This chapter describes priority setting as a strategic process to increase the return on public investments in research. It shows that governments use various institutional mechanisms for this: national science and technology plans, (de)centralised advisory bodies, foresight processes and public consultation. It further describes how priorities are reflected in research funding decisions, and how recent reforms reflect the changing balance between top-down and bottom-up approaches.

- Involving diverse stakeholders should contribute to increase transparency and accountability and allow to better respond to societal needs. Target stakeholders could be: business and civil society involved in the central advisory council on science and technology, multi-stakeholders involved in bodies that coordinate or fund research, scientific experts, policy, business and community representatives.
- The identification of priority issues can be achieved by using national science and technology plans, by accessing to

decentralised advisory bodies as well as by implementing public consultations and foresight processes. Foresight processes can be performed through methods such as future research prospecting and technology roadmaps. The Futur method implies the organisation of a forum for open dialogue between diverse stakeholders, to identify future priority fields of research. Research prospecting allows the identification of novel research topics and fields. Technology roadmaps involve a planning process based on the projected needs of tomorrow's markets. This methods helps companies identify, select and develop technology alternatives.

- Criteria for priority setting should respond to the different challenges involved in the process: balancing competing pressures (basic versus oriented research, core funding versus project funding, competition from increasing industry funding), institutional funding (rigidity of the research system, autonomy of research institutions, financing of high risk pre-competitive research), responding to emerging technologies and societal needs, promoting multidisciplinary research.

### **2.1.4 Gibson, J.L., Martin, D.K., Singer, P.A., Setting priorities in health care organizations: criteria, processes, and parameters of success. BMC Health Serv Res, 2004. 4(1): p. 25.**

This paper summarises the lessons learned from workshops conducted for Board members and senior administrators at three Canadian academic health science centers who were seeking ethics advice on how to improve priority setting in their organisations.

Workshop participants identified a number of preparatory steps that should be taken before priority setting can begin and additional elements that were important to improve quality and strengthen capacity for fair priority setting in their organisations over time.

- Need of: 1) involving stakeholders in the priority setting process, 2) forming a multidisciplinary executive decision-making

group, 3) clarifying and determining specific responsibilities of the board and senior management in relation to the priority setting process.

- An effective communication strategy should be developed to ensure transparent process and that stakeholders know and understand the scope and necessity of the priority setting decision-making, the degrees of freedom within priority setting and the particularities of the process (who will do what?, how?, why?).
- The following criteria should be considered when setting priorities in health care organisations: strategic fit, alignment with external directives, academic commitments, clinical impact, community need, partnerships, interdependency, and resource implications. Fairness is a key ethical goal of priority setting when health care resources are scarce.
- Quality improvement and capacity strengthening should be developed for fair priority setting. Process monitoring and formal evaluation strategies should be developed to ensure quality improvement and organisational learning. Process should be supported by leadership development and change management strategies to strengthen institutional capacity for priority decision making.

#### **2.1.5 COHRED, Priority setting for health research: lessons from developing countries. The Working Group on Priority Setting. Health Policy Plan, 2000. 15(2): p. 130-6.**

This paper proposes a strategy of priority setting, based on lessons learned from essential national health research (ENHR) approaches attempted in several developing countries.

The proposed model aims at equity in health and development, it is demand-driven, and involves multi-dimensional inputs and multiple stakeholders.

- Different approaches may be applied in the formation of the group in charge of the priority setting process. Possible approaches could be: 1) the organisation of a national

workshop followed by the formation of a task force to refine the research agenda, 2) formation of an inter-sectoral and multidisciplinary working group appointed by the Ministry of Health, 3) a research institute or university tasked to develop and propose processes for priority setting and a larger group of participants tasked to apply the proposed processes. Stakeholders involvement should be multilevel (communities, districts, sub-national, national) and multidimensional (quantitative and qualitative scientific input, social, economic political and management). Involving major stakeholders in priority setting fosters ownership of process and output, and facilitates shared responsibility and accountability in the implementation of the research agenda. Target stakeholders could be: researchers, decision makers at different levels, health service providers, communities, private sector, parliamentarians, potential donors, international agencies.

- The consultative group processes should be inclusive, participatory, interactive and iterative. Approaches could be: collection and analysis of health information, people's consultations through focus-group discussions or interviews, consensus building on specific thematic areas, decision-making for determining and applying criteria for priority setting, translation of priority research areas into specific research programs and projects.
- Research priorities will depend on a two-step process: 1) selection of criteria for priority setting, 2) selection of research topics among identified priority problem areas. Some examples of criteria categories could be: magnitude and urgency of the problem; extent of previous research and the potential contribution of research in discovering, developing or evaluating new interventions; feasibility of carrying out the research in terms of technical, economic, political, socio-cultural and ethical aspects; expected impact of the research considering direct and indirect effects, short- and long-term benefits, implications on issues of affordability, efficacy, equity and coverage. The selection of the final criteria will depend on the purpose and level of action of the

priority-setting exercise, on the availability of information related to the specific criterion and on the ability to define and measure the criteria in a common framework.

- Evaluation can be achieved through the assessment of indicators. Indicators could be: 1) utilisation of the research agenda (How extensive was the implementation of the research priorities?, How much interest did the research agenda generate among stakeholders?); 2) involvement of multiple stakeholders (How many groups were involved and what were their contributions?); 3) equity in health (Do the research priorities address equity in health?, proportion of researchers that address health problems of the poor, shift of resource flows towards equity-targeted programs and the identified research priorities).

#### **2.1.6 NIH, Setting research priorities at the National Institute of Health, US National Institute of Health.**

Available from:

[www.nih.gov/about/researchpriorities.htm](http://www.nih.gov/about/researchpriorities.htm)

(Accessed: February 13, 2006)

This booklet describes the principles and mechanisms that guide the NIH (National Institutes of Health) in the continuous activity of managing its budget.

- NIH involves stakeholders at different levels: general public, patients and their advocacy groups, institute staff, congress, scientist council members, ad hoc advisors, physicians and other health professionals, industry scientists, industry managers, professional societies, public members of advisory councils, boards of scientific counselors, president and administration, scientific review committees, scientists.
- NIH seeks opinion and counsel through methods like review groups; national advisory councils to review policy, with members from the public and from the medical and scientific community; advisory groups of outside experts to assess trans-NIH activities and to recommend budgetary and programmatic improvements;

consultations with federal agencies for budgetary and programmatic insight.

- Criteria determining NIH decisions are: 1) obligation to respond to public health needs as judged by the incidence, severity, and cost of specific disorders; 2) stringent review for scientific quality on all research proposals to return the maximum on public's investment in medical research; 3) portfolio must be large and diverse (support research along broad, expanding frontier) because discoveries can not be predicted and opportunities that fresh discoveries may produce can not be anticipated; 4) continual support to the human capital and material assets of science by supporting: research training, acquisition of equipment and instruments, some limited construction projects, institution's costs for enabling the research programs.

#### **2.1.7 Jackson, A. Strategic futures planning, suggestions for success, 2005.**

Available from:

[www.foresight.gov.uk/HORIZON\\_SCANNING\\_CENTRE/Toolkit/Toolkit.html](http://www.foresight.gov.uk/HORIZON_SCANNING_CENTRE/Toolkit/Toolkit.html)

(Accessed: February 13, 2006)

This toolkit proposes the use of futures approach in the priority setting process. The approach helps building new networks, it creates a shared vision of how to move forward where a number of organisations have a stake in an issue, it highlights challenges and opportunities, tests robustness of policies and allows the optimal use of resources.

- Methods that can be applied for the identification of priority issues: Horizon scanning, Delphi, Trend analysis, Driver analysis, Scenarios, Visioning, Technology roadmaps, System maps, Back-casting, Modeling, Simulation, Gaming, Data review, In-depth interview, Focus-group discussions, Consultative meetings, Round tables, Surveys, Field visits, Workshops, Seven questions, Issues trees, System maps, Review of areas of science.

## **2.1.8 Musgrove, P., Public spending on health care: how are different criteria related? Health Policy, 1999. 47(3): p. 207-23.**

This paper describes the relationship between nine different criteria considered to be relevant for decisions about public spending for health care. These include economic efficiency criteria (public goods, externalities, catastrophic cost, and cost-effectiveness), ethical reasons (poverty, horizontal and vertical equity, and the rule of rescue), and political considerations (especially demands by the public).

Criteria are hierarchically related. Sometimes two criteria will not be compatible but will conflict, forcing difficult choices—particularly between efficiency and equity. Properly thought-out choices of which health care interventions to finance with public funds therefore depend not only on looking at all these criteria, but also on treating them in the appropriate sequence and taking account of their possible inconsistencies.

- Criteria for deciding on public spending should be based on economic efficiency, ethical reasons and political considerations.
- The economic efficiency dimension takes into consideration: cost-effectiveness (relation between the cost of an intervention and the resulting health gain), public goods, externalities, and catastrophic cost.
- Ethical reasons concern: poverty, horizontal equity (giving equal treatment to people with equal health problems, implying equal effectiveness), vertical equity (preferential treatment for people with worse problems), and the rule of rescue (grouping patients into: those whose lives can be saved by intervening, those who will die even if given treatment, those in between because their lives are not immediately threatened).
- Political considerations relate to public demand (what the public thinks its money should be used for).

## **2.1.9 Fleurence, R.L., Torgerson, D.J., Setting priorities for research Health Policy, 2004. 69(1): p. 1-10.**

This paper evaluates the way research is valued and assesses whether the corresponding priority setting method can meet the objectives of the health system.

Different approaches that have been used in practice to value research and set priorities were reviewed.

- The “subjective methods” approach bases most decisions on the scientific relevance as well as excellence of research proposals. The value put on research is subjective and dependent on the particular group that conducted the priority setting exercise. This type of approach is unlikely to lead to an allocation of resources that is consistent with the objectives of the health system.
- The “valuating the burden of disease” approach values the ‘size’ of the disease with the assumption the higher the burden of the cost to society of the disease, the greater the need for research. Priorities in research are based on the relative contribution of diseases to the total burden and set by ranking diseases in terms of their cost to society. This approach assumes that the burden of disease rankings can be translated into the need for research. In the absence of a measure of the value of research, priorities set by burden of disease or cost of illness methods cannot lead to an appropriate allocation of resources that meets the objectives of the health system.
- The “valuating the impact on clinical practice” approach values the impact of changes in clinical practice that occur as a result of the research taking place. This approach assumes that health benefits are dependent on the results of research and on changes in clinical practice that would occur as a consequence of the research results. Impact is measured by valuating the costs and benefits of conducting and implementing research. Fleurence *et al.* consider that such approach may not meet the objectives of health systems. Research money is more efficiently spent on interventions where uncertainty is great,



rather than on conducting trials with the main objective of changing clinical practice.

- The “valuating information” approach assumes that information provided by research can be measured and valued, and inform the decision to conduct research. The framework separates the decision to adopt a technology based on current information from the decision to conduct further research. This approach recognises the uncertainty inherent in the decision due to the uncertainty in the parameters that enter the decision. A quantitative measure of uncertainty is provided by the use of decision analytic models.

**2.1.10 Gericke, C.A., Kurowski, C., Ranson, M.K., Mills, A., Intervention complexity - a conceptual framework to inform priority-setting in health. Bull World Health Organ, 2005. 83(4): p. 285-93.**

This paper describes a conceptual framework for the analysis of interventions according to the degree of technical complexity; this complements the notion of institutional capacity in considering the feasibility of implementing an intervention.

The framework is illustrated using the examples of scaling up condom social marketing programs, and the DOTS strategy for tuberculosis control in highly resource-constrained countries.

- “Intervention complexity” framework could be used to inform priority setting in health; as a tool for policy-makers, planners and program managers when considering the expansion of existing projects or the introduction of new interventions.
- This approach categorises interventions according to their degree of complexity, identifies supply- and demand-side constraints, points to potential areas for the improvement of specific aspects of each intervention, provides overview of which human resource skill level is needed for which aspect of the intervention, assists in identifying bottlenecks, indicates where focus for future professional development

should lie and it can be used both to define what is feasible locally and to identify the best way to deliver an intervention.

Main criteria considered in this approach are: intervention characteristics (basic product design, supplies, and equipment), delivery characteristics (facilities, human resources, communication and transport), government capacity requirements (regulation/legislation, management systems, and collaborative action), usage characteristics (ease of usage, pre-existing demand, black-market risk).

**2.1.11 Daniels, N., Sabin, J., Setting limits fairly: Can we learn to share medical resources? Oxford University Press, 2002, ISBN 0-19-514936-X**

The central idea of this book is that there is a lack of consensus on principles for allocating resources. In the absence of such consensus a fair priority setting process is needed for setting limits on health care.

The authors propose four conditions for rationing, termed as "accountability for reasonableness":

- Publicity. Decisions and the rationales for decisions such as coverage for new technologies or the contents of a drug formulary must be accessible to clinicians, patients and potential health plan subscribers — or citizens in a publicly administered system.
- Relevance. The grounds for such decisions must be ones that fair-minded people can agree are relevant to meeting health care needs fairly under conditions of reasonable resources.
- Appeals. There must be mechanisms to challenge and resolve limit-setting decisions and opportunities to revise and improve policies in the light of new evidence or argument.
- Regulation. There must be some form of regulation to ensure that the other conditions are met. These regulations could come through governmental regulation, or be voluntary.

The "accountability for reasonableness" approach speaks directly to the public deliberation that is central to a democracy and

seeks to educate the public about the need to set limits to health care.

## 2.2. Methods for priority setting

METHOD	DESCRIPTION	APPLICATION	Source
Horizon Scanning	<ul style="list-style-type: none"> <li>• Looking across an area to identify future challenges and opportunities</li> <li>• It can range from systematic to more open exploration of an area</li> <li>• It can be near-term or look for issues at the limit of current thinking</li> </ul>	<ul style="list-style-type: none"> <li>• Spot key issues before undertaking an in-depth analysis of interaction and social context</li> </ul>	"Strategic futures planning, suggestion for success" ( <a href="http://www.foresight.gov.uk">www.foresight.gov.uk</a> ), by Andrew Jackson, March 2005
Delphi	<ul style="list-style-type: none"> <li>• Type of consultation</li> <li>• A two stage process starting with a questionnaire to seek initial views from a wide range of experts.</li> <li>• The responses are collated and sent out again to the contributors for comments</li> <li>• The experts are also asked to assess their relative level of competence in answering the questions</li> </ul>	<ul style="list-style-type: none"> <li>• Get and overview of what is happening in an area of science</li> </ul> <p><b><i>CAUTION:</i></b> <i>it does not encourage interaction and it is very dependent upon experts finding the time to complete a series of questionnaires</i></p>	
Trend Analysis	<ul style="list-style-type: none"> <li>• Extrapolating historical data forward</li> <li>• More suited when looking at an issue that takes time to change, rather than an issue that is very responsive to immediate pressure</li> </ul>	<ul style="list-style-type: none"> <li>• Testing policy robustness and spotting developing problems</li> </ul> <p><b><i>CAUTION:</i></b> <i>its great weakness is that the future is rarely an extrapolation of the past</i></p>	

Driver Analysis	<ul style="list-style-type: none"> <li>• Spotting the factors which are driving and shaping the trends and considering possible future interactions</li> <li>• Suited to do a detailed study of interactions, looking for critical factors which are likely to shape the future</li> <li>• Suited to use as the basis for the development of scenarios, roadmaps or visions</li> </ul>	<p>Testing policy robustness and spotting developing problems</p> <p><b><u>CAUTION:</u></b></p> <ul style="list-style-type: none"> <li>- If used for a detailed study the challenge is to quantify the relationship between the different drivers</li> <li>- If used for the development of scenarios, the challenge is to decide which of the many scenarios will be built from the information gathered</li> </ul>	
Scenarios	<ul style="list-style-type: none"> <li>• Pictures of what the future might look like</li> <li>• Internally consistent and built up from an assessment of how trends and drivers might influence the present to create the future</li> <li>• Usually 3 to 4 scenarios are produced</li> </ul>	<ul style="list-style-type: none"> <li>• Test the robustness of policies against a range of future challenges</li> <li>• Spot the unexpected, both potential challenges and opportunities</li> <li>• Explore the context into which strategies and policies can be played out</li> </ul>	
Visioning	<ul style="list-style-type: none"> <li>• Creating a rich picture of what the future might look like based on less rigour and more imagination</li> </ul>	<ul style="list-style-type: none"> <li>• To increase the chances of a vision having success, it should have a ring of truth. The best way to achieve this is for the vision to reflect emerging patterns that will strike a chord with those hearing it</li> </ul>	
Roadmaps	<ul style="list-style-type: none"> <li>• In the broadest sense, roadmaps set out the steps to achieve a desired goal</li> <li>• A technology roadmap often includes an assessment of the social drivers, science drivers, technologies and their applications</li> </ul>	<ul style="list-style-type: none"> <li>• Explore possible future products and the key pieces of science one would need to integrate to deliver those products</li> <li>• Map out specific action one wants to take to deliver a new technology</li> </ul>	
Backcasting	<ul style="list-style-type: none"> <li>• First producing an ideal future and then considering the steps one will need to take to increase the chances of achieving the desired outcome</li> </ul>	<p><b><u>CAUTION:</u></b> only possible if one has clear unambiguous aims</p>	

<b>Modelling</b>	<ul style="list-style-type: none"> <li>• Good data is necessary to build and calibrate models</li> <li>• They can be built when examining the future of a system</li> <li>• It is necessary to have an understanding of the factors that will affect the way the system will change over time</li> <li>• Models can provide metrics to help assess the relative impact of different options in more objective fashion</li> </ul>	<ul style="list-style-type: none"> <li>• To consider a complex issue where debate is focused on people's perceptions rather than evidence</li> </ul> <p><b><u>CAUTION:</u></b> one should be aware of the limitations of the figures produced by the applied model</p>	
<b>Simulation</b>	<ul style="list-style-type: none"> <li>• Simulated scenarios where a computer model plays all the other parts and one as individual has a chance to see the effects of one's decisions in the complexity</li> </ul>	<ul style="list-style-type: none"> <li>• To communicate the complexity of decisions to a wide audience</li> <li>• To broaden perspectives of implementing policies</li> </ul>	
<b>Gaming</b>	<ul style="list-style-type: none"> <li>• Stakeholders are asked to assume that they find themselves in a scenario and are asked to decide how they would respond</li> </ul>	<ul style="list-style-type: none"> <li>• For owners of policies to see how policies they are setting today may influence the future and how robust they will be in the long term</li> </ul>	
<b>Ad Hoc Committee on Health Research Approach</b>	<ul style="list-style-type: none"> <li>• A five-step process aiming to allocate limited resources efficiently and effectively between a large number of possible research projects so as to have the largest possible impact on the health of the largest possible number of people</li> <li>• It analyses mostly biomedical determinants</li> <li>• Cost-effectiveness is measured in terms of DALYs saved for a given cost</li> </ul> <p>DALYs: number of years of healthy life lost to each disease</p>	<ul style="list-style-type: none"> <li>• Help decision-makers make rational choices in investment decisions so as to have the greatest reduction in the burden of disease for a given investment</li> </ul>	"Investing in Health Research and Development", Report of the Ad Hoc Committee on Health Research Relating to Future Intervention Options. WHO, Geneva, 1996
<b>Combined approach matrix</b>	<ul style="list-style-type: none"> <li>• A relation of the five-step process in priority setting (economic axis) with the</li> </ul>	<ul style="list-style-type: none"> <li>• Bring together in a systematic framework all information related</li> </ul>	"The combined approach matrix: a priority setting tool

	<p>actors and factors (institutional axis) determining the health status of a population</p> <ul style="list-style-type: none"> <li>• It helps organise, summarise and present all available information in one disease, risk factor, group or condition</li> <li>• It facilitates comparisons between the likely cost-effectiveness of different types of interventions at different levels</li> </ul>	<p>to a particular disease or risk factor</p> <ul style="list-style-type: none"> <li>• Identify gaps in knowledge and future challenges</li> <li>• Identify 'common factors' by looking across the diseases or risk factors</li> </ul>	<p>for health research", edited by Abdul Ghaffar, Andres de Francisco and Stephen Matlin. Global Forum for Health Research, June 2004</p>
<b>Advisory Committee on Health Research Approach</b>	<ul style="list-style-type: none"> <li>• Multidisciplinary approach based on the analysis of various determinants: biomedical, economic, social, behavioural, etc.</li> <li>• Analysis of health status and the recognition of deficits</li> <li>• Identification of imperatives and opportunities for global health research</li> <li>• Transfer of knowledge to programs which aim to reduce the health deficits</li> </ul>	<ul style="list-style-type: none"> <li>• Analyse the current world health and development conditions and problems</li> <li>• Identify what is known and not known</li> <li>• Identify what the Research Agenda refers to as research 'imperatives', 'opportunities' and ultimately 'priorities'</li> <li>• Develop new knowledge, methodologies and approaches that contribute to problem solving and ultimately to better health</li> </ul>	<p>"A research policy agenda for science and technology, to support global health development". The advisory committee on health research. WHO, 1997</p>
<b>Essential National Health Research Approach</b>	<ul style="list-style-type: none"> <li>• Multidisciplinary and cross-sectoral approach</li> <li>• Systematic analysis of health needs, societal and professional expectations</li> <li>• Involves researchers, policy-makers, health care providers and community representatives</li> <li>• Participatory and transparent process</li> <li>• Facilitates partnership development</li> </ul>	<ul style="list-style-type: none"> <li>• Guide resource allocation and donor investments in health to areas of highest priorities</li> <li>• Address the issue of equity</li> <li>• Direct attention to the most vulnerable groups of the population</li> <li>• Reinforce the links between research, action and policy</li> </ul>	<p>"Priority setting for health research: lessons from developing countries". The working group on priority setting, COHRED. In Health Policy Plan, 2000. Vol 15 (2), pages 130-136.</p>

## Annex 1: Agenda

### COHRED Think Tank meeting Priority Setting in Research for Health

**Geneva, 20 and 21 February, 2006**  
**Venue:** Conference Centre Varembé (Geneva)

**Monday February 20, 2006 (9am - 5pm)**

The aim of the consultation is to increase our understanding of how priority setting for health research can contribute to health and development at the country level. The consultation is the starting point of an ongoing learning process, aimed at developing an approach towards priority setting that can be continuously adapted when new experiences become available.

The first day of the consultation will focus around the question 'How to develop a national priority research agenda for health?' During this day we will take stock of past experiences and look at the usefulness of priority setting, and the best processes and best methods to set priorities.

#### 9 am - 12 am:

- Introductions:
  - *Carel IJsselmuiden:* Welcome and general aims of the consultation
  - *Sylvia de Haan:* Outline of the two days, process that will be followed & key areas to be addressed in priority setting for research for health
- Discussion on aims of the meeting and the main issues to be discussed
- Why set health research priorities? What is the usefulness of priority setting?

General brainstorming session identifying the main reasons for defining a priority research agenda, looking at economic,

political, ethical and health reasons, and considering the overall research system and key values of research for health. Other issues that need to be considered include: the definition used for research; the link between national and international research agenda's.

- Which process is needed to set national health research priorities? Examples of best practice?

Who should lead the process, who else should be involved, and when should people and organisations be involved? What are the mechanisms and agreements needed to guide and coordinate the process? Which preparatory work is needed to define priorities: decisions re information needed, methods to be used, criteria and ranking to be applied? What should the focus of priority setting be (disease oriented versus more system oriented)? What is the time perspective needed for priority setting (short versus long term perspective)? What type of research should be prioritised?

#### 13.30 - 17.00:

- Which methods can be used?

Review of existing methods, criteria and ranking of criteria and the experiences that participants have in applying these. Is it possible to recommend the use of certain methods? What are advantages and disadvantages of methods?

Tuesday February 21, 2006

9am - 4pm

The second day of the consultation we will look forward and address the question 'What's next?' What is needed to make priority setting work? A more detailed agenda for day two will follow from the discussions of the first day, but some of the questions that will be addressed include:

- How can priority setting for health research influence public debate around health and development issues?
- Should priority be given to conduct research in the areas with a highest chance of success?
- How to use national priorities to influence international priorities?
- How to monitor and evaluate progress with the implementation of a research agenda?
- How to keep a priority agenda alive?
- How can the priority setting process contribute to the development of a national health research system?
- How can COHRED best support national priority setting? (Issues of brokerage and enabling)

## Annex 2: List of Participants

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